

Relative Error Reduction as a Function of the Amount of Training Data

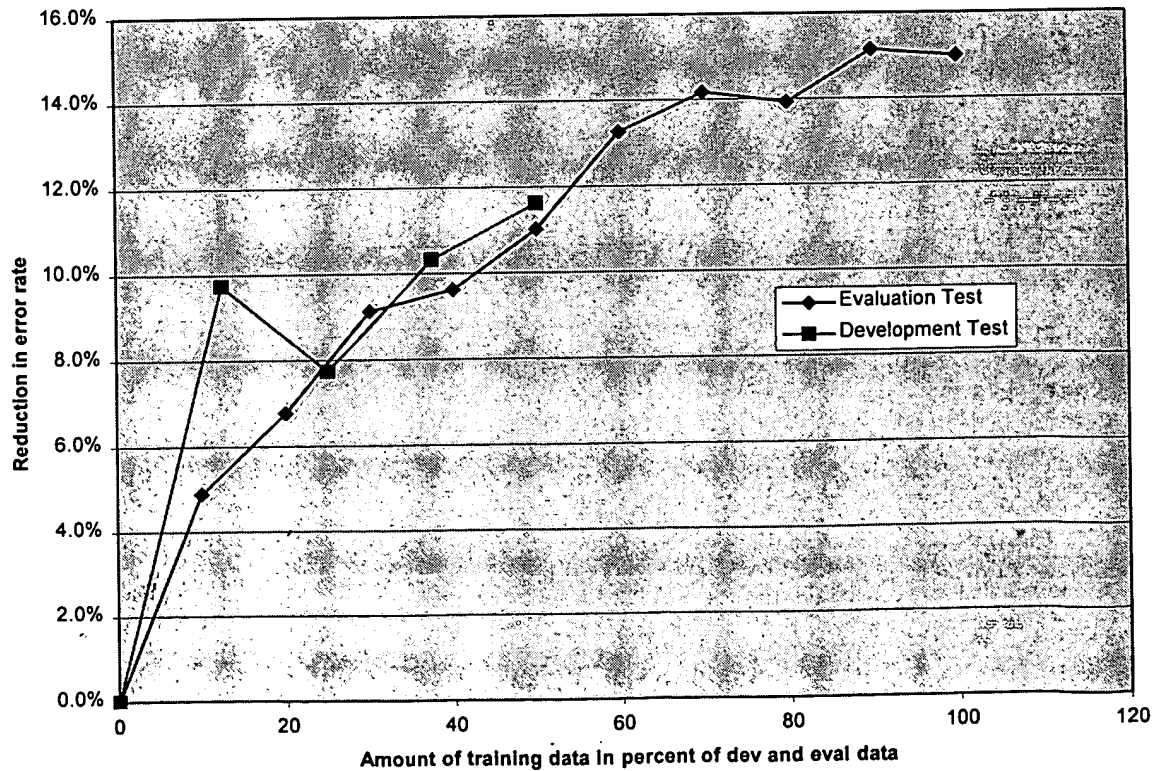


Figure 2

Table 1A: Recite First-Pass Results on AT&T Dev, Baseline (B) vs. Adapted (A/S) Word Bigram Priors (A = All Dev Test Data, S = Subset Result for confidence > 0.2)

	Word Stats							Sent Stats			
	WER	SER	Corr	Rej	Sub	Del	Ins	Rej	Sub	#Wrd	#Snt
B	34.07	38.81	72.75	1.31	22.61	3.33	6.82	1.19	37.62	10281	4447
A	28.04	31.21	77.86	1.31	17.84	2.99	5.90	1.19	30.02	10281	4447
S	30.21	33.96	75.52	1.31	19.82	3.35	5.73	1.19	32.76	10281	4447

Inclusion				CPU Performance						
N	Baseline	Adapted	Subset	#sent	#seg	#bnd	#pushes	#usecs	RT-MHz	
				/utt	/utt	/utt	/utt	/utt	(P233)	
1	61.19	68.79	66.04							
2	71.73	77.38	75.20							
3	76.03	80.50	78.86	B	4394	353.0	60.3	7.575e+05	1.883	85.1
5	79.78	83.00	82.51							
10	83.79	85.47	85.90	A	4394	353.0	60.3	5.914e+05	1.889	85.4
20	86.37	87.23	88.33							
50	87.07	87.79	89.07	S	4394	353.0	60.3	6.539e+05	1.983	89.6

Figure 3A

Table 1B: Recite First-Pass Results on AT&T Eval, Baseline (B) vs. Adapted (S) Word Bigram Priors (S = Subset for confidence > 0.2)

	Word Stats							Sent Stats			
	WER	SER	Corr	Rej	Sub	Del	Ins	Rej	Sub	#Wrd	#Snt
B	34.89	39.55	72.14	0.87	23.49	3.49	7.04	0.89	38.66	10016	4402
S	31.38	35.14	74.67	0.87	20.92	3.54	6.05	0.89	34.26	10016	4402

Inclusion				CPU Performance			
N	Baseline	Adapted	Subset	#pushes	#usecs	RT-MHz	
				/utt	/utt	(P233)	
1	60.45	64.86					
2	72.01	75.28					
3	76.37	79.15		B	7.575e+05	1.883	85.1
5	80.33	82.80					
10	84.03	86.12		S	6.443e+05	1.862	84.2
20	86.94	89.10					
50	87.71	89.66					

Figure 3B

Recite First-Pass Results on IVPATT613 Dev, Baseline vs. Adapted Transcriptions

UC 1	UC 2	UC 3	UC 10	UC 20	Lexicon*
86.3	91.4	93.1	95.3	96.0	baseline
88.0	93.2	94.7	97.3	97.8	reqnames_dt+std.fa_prons.+std
88.5	93.5	95.0	97.4	97.8	gen+names_dt+std.fa_prons.+std

Figure 4A

Recite First-Pass Results on IVPATT613 Eval, Baseline vs. Adapted Transcriptions

UC 1	UC 2	UC 3	UC 10	UC 20	Lexicon*
89.1	93.2	94.5	96.6	97.2	baseline
89.2	93.4	94.6	97.3	97.9	reqnames_dt+std.fa_prons.+std
89.4	93.9	95.1	97.3	98.1	gen+names_dt+std.fa_prons.+std

Figure 4B

*** Lexicon Descriptions:**

reqnames_dt+std.fa_prons.+std:

request_names trained DT to generate alternate transcriptions

added standard transcriptions (official IVPATT dev dict)

filtered with a forced alignment over the DEV data

added standard transcriptions again to create final recognition lexicon

gen+names_dt+std.fa_prons.+std:

same as reqnames, except used gen+names to train DT

66T50" EETEE68

Combined ITFA Experiment (Word_priors + HMMs)

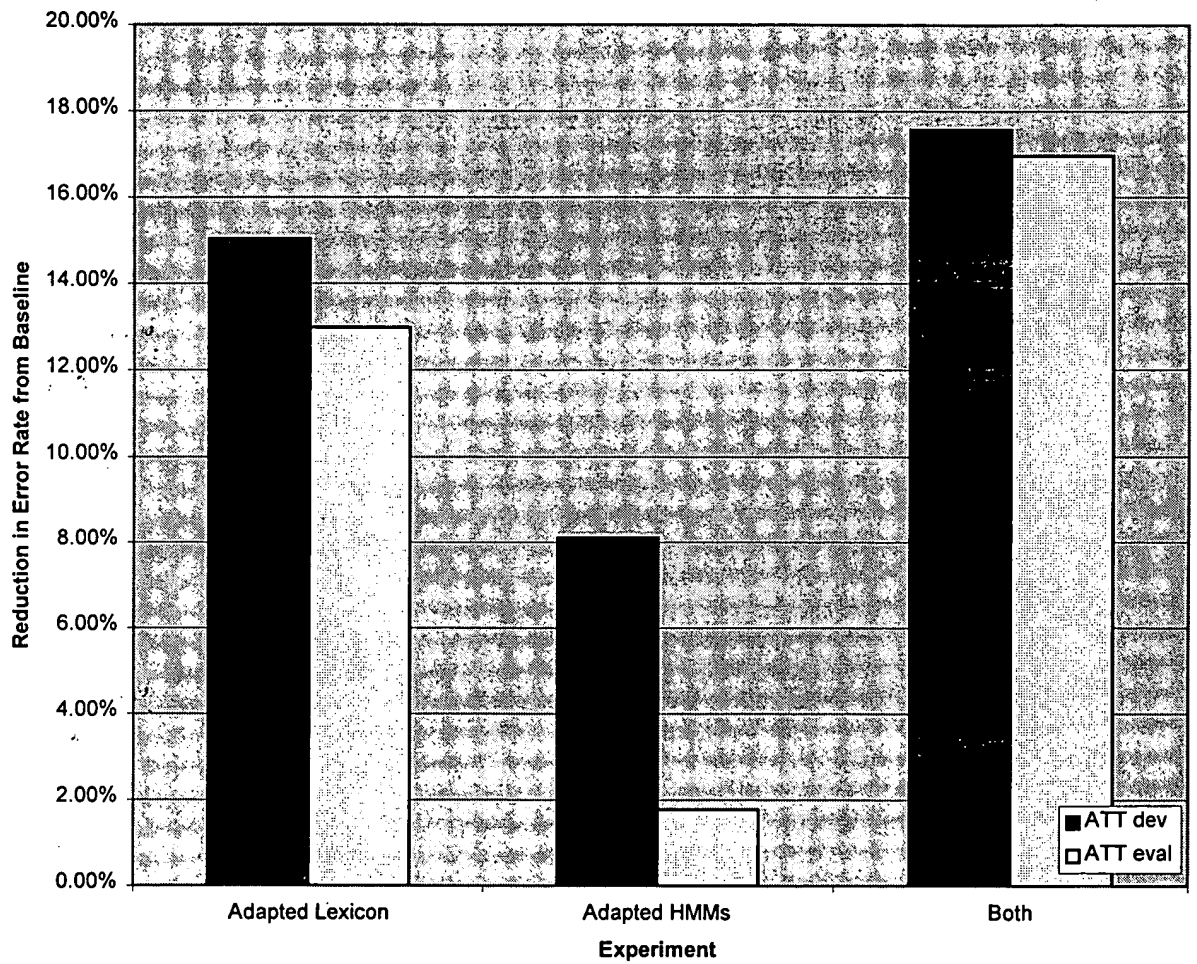


Figure 5